REMARKS

By this amendment, claims 1 and 31 are amended to place this application in condition for allowance. According to the Office Action, claims 1, 2, 18-23, 31, 45, and 46 are being considered by the Examiner, and claims 3-17, 24-30, 32-44, and 47-50 are withdrawn from consideration.

First, Applicant acknowledges the acceptance of the drawings as submitted as part of the last response.

Second, Applicant acknowledges receipt of the Petition regarding the restriction requirement, and awaits a decision on said Petition.

Third, the response to the issue regarding priority and the final rejection are addressed below under their respective headings.

PRIORITY

In the final rejection, the Examiner again alleges that the priority document does not support the invention as claimed.

Applicant previously argued that Figure 6 of the priority document did, in fact, provide support for the features found in Figures 13 and 14 of the invention.

Applicant is again submitting Figure 6 from the Japanese patent corresponding to the priority document in question. This Figure 6 has English translations of the various boxes found in the drawing. As previously argued, the components identified in Figure 13 of the instant application are disclosed in Figure 6, and therefore, the priority document does provide support for this aspect of the invention.

In light of the above, the Examiner is respectfully requested to acknowledge that Figures 13 and 14 gets the benefit of the priority application filing date.

REJECTION

In the Office Action, the Examiner continues to reject claims 1 and 31 under 35 U.S.C. § 102(b) based on the admitted prior art (APA) as shown in Figure 22 of the instant application.

This rejection is flawed for a number of reasons, including all of those proffered in the previous response. Nevertheless, and in order to advance the prosecution of this application, claims 1 and 31 are amended to clarify the key aspect of the invention, which makes it distinguishable from the APA. While the entry of these amendments is discretionary on the part of the Examiner, Applicant believes that they clearly make claims 1 and 31 patentably distinguishable over the APA, and their entry should be permitted so that the application can be allowed.

In review, each of claims 1 and 31 is revised to clarify that an estimated direction is derived from a set of signal values obtained from the microphone array during one time window. In addition, the amendments to claims 1 and 31 further recite that the plurality of successive time windows are of identical duration. More particularly, claim 1 now recites a succession of steps including operating on respective output signals during a fixed length time window. This operation results in obtaining a set of M audio signals with a set corresponding to the time window. Then, the succession of steps is repeated for each of a plurality of time windows to obtain an estimated direction for each window. Similarly, claim 31 is amended to clarify that the waveform extraction means operates during a fixed length time window to obtain a set of M audio signals corresponding to the time window. Claim 31 further states that the apparatus now operates during a successive plurality of identical length time windows to obtain a plurality of estimated directions, each estimated direction corresponding to a respective time window.

These aforementioned features are unequivocally not found in the APA and, therefore, this amendment should be entered and this application should be passed onto issuance.

Regarding the first feature noted above, there is no set of signal values derived from the microphone array during one time window in the APA. Rather,

the APA uses one signal for each time window, not a set of signals for the one time window.

Further, the time interval used in the APA is totally dependent on the speed of the sound source. Therefore, successive time intervals will not be of identical duration, a requirement of the amended claims.

The absence of these two features in the APA means that the Examiner cannot allege that the APA anticipates claims 1 and 31, and the rejection under 35 U.S.C. § 102(b) must be withdrawn.

Moreover, there is no basis to argue that the APA obviates claims 1 and 31 under 35 U.S.C. § 103(a), since the Examiner has no reason whatsoever to modify the APA so as to arrive at the instant invention. Since the prior art lacks the basic and inventive concept of the invention, the Examiner can only rely on hindsight to formulate such a rejection, and such a rejection could not be upheld on appeal.

There are other reasons that the rejection is in error and should be withdrawn.

In the rejection, the Examiner alleges that the changeover circuit of Figure 22 is the same as the waveform extractor means of claim 31. Applicant is at a loss as to the basis for this rejection. The waveform extractor means is defined in claim 31 as producing a set of M audio signal portions with each set corresponding to the given and fixed length time window, or sets corresponding to respective time windows. There is no set for each time interval in the APA; the APA uses one signal for each time interval and this reference cannot be said to suggest the waveform extractor means of claim 31.

Also in the rejection, the Examiner alleges that the presence of components SA and SB in the APA meets the claim limitations regarding the presence of a plurality of components. In making this assertion, the Examiner fails to address the entire claim limitation. Claim 1 recites the step of applying frequency analysis to separate each signal portion into the plurality of components, with each signal portion defined as coming from an array of microphones. Frequency distributions SA and SB are merely the result of traffic

noise A and B, respectively, wherein each distribution is derived from one microphone. SA or SB is not the result of the signals from a number of microphones as 901 and 902. Rather, each of SA and SB is derived solely from one microphone, and this distribution cannot be considered to be the same as that claimed.

Moreover, the Examiner's assertion that the APA teachings regarding the angle of vector in the distributions SA and SB and the disclosure that the direction of sound source is based on time difference somehow teaches the last two steps of claim 1 makes no sense. The second last clause of claim 1 is clear in obtaining data expressing a frequency based direction of a sound source based on a position in the microphone array. The Examiner's reply does not address all of the features in this step. For example, where in the APA is the teaching regarding the data based on a position in the microphone array. There is no microphone array so how can this step be taught? Characterizing the two microphones of the APA as an array is an improper interpretation of the APA teachings, and the Examiner cannot continue to make the rejection under 35 U.S.C. § 102(b).

Similarly, the mere fact that the APA generates SA and SB does not means that the averaging step of claim 1 is taught. The mere reference to the APA description and the determination of the sound velocity and subsequent calculation of direction is not the same steps as claimed in claim 1. Therefore, the Examiner cannot allege anticipation of claim 1 in this regard, and the rejection is flawed for this reason.

Likewise, claim 31 is not suggested by the disclosure of the APA when considering the limitations regarding the frequency analyzer means. As with claim 1, there is no justification for the Examiner to allege that this claimed means is disclosed in the APA. There are no sets of audio signal portions, and there can be no anticipation for this reason.

The processing means is also absent from the APA because APA does not have any means for operating on the components generated from the frequency analyzer means, and expressing an estimated direction of the sound

source with respect to a position in the microphone array. As argued above, there is no "position in a microphone array" in the APA, and this alone prevents a rejection based on 35 U.S.C. § 102(b).

Applicant also wishes to incorporate the previously made arguments regarding the prior art rejection and again contend that the rejection under 35 U.S.C. § 102(b) is unsubstantiated and should be withdrawn.

AFTER FINAL STATUS

As mentioned above, and although an amendment is proposed after final, the amendment is made to clarify the claim language so as to more clearly point out the invention. It does not raise any new issues; the presently-made arguments associated with the amendments to claims 1 and 31 are essentially the same as made previously, i.e., that the estimated direction is derived from the set of signal values obtained from the microphone array during one time interval, and that the window of operation is of fixed length.

SUMMARY

Based on the above, it is absolutely clear that the admitted prior art cannot serve as a basis to reject claims 1 and 31 under 35 U.S.C. § 102(b).

Furthermore and as mentioned above, there is no reason to arrive at the invention from an obvious standpoint without using hindsight and the Applicants' disclosure as a teaching template. Thus, any rejection based on 35 U.S.C. § 103(a) can only be speculation, and would be improper if made.

Accordingly, claims 1 and 31 are patentably distinguishable from the prior art, and should be passed onto issuance.

Applicant also wish to reiterate that claims 1 and 31 are truly generic claims, and Applicant is entitled to a reasonable number of species to be allowed with these claims. Applicants contend that all claims should be allowed based on the Petition submitted herewith. This request is also deemed reasonable in light of the Examiner's comments that the dependent claims

would be considered to be included with the generic claims if they are found allowable.

Accordingly, and assuming that the Petition is granted or the Examiner finds that claims 1 and 31 are allowable and generic, the Examiner is respectfully requested to examine this application, withdraw the restriction requirement, and pass claims 1-50 onto issuance.

If an interview would expedite the allowance of this application, the Examiner is respectfully requested to telephone the undersigned at 202-835-1753.

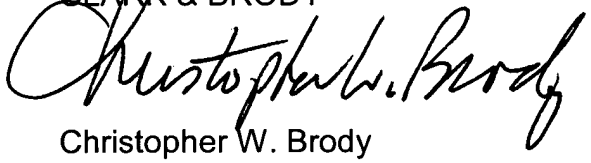
The above constitutes a complete response to all issues raised in the Office Action of April 2, 2004.

Again, reconsideration and allowance of this application is respectfully solicited.

Applicant petitions for a one month extension of time, to extend the time to respond to the outstanding Office Action until August 2, 2004. A check in the amount of $110.00 is attached herewith to cover the cost of the one month extension of time.

Please charge any fee deficiency or credit any overpayment to Deposit Account No. 50-1088.

Respectfully requested,
CLARK & BRODY



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